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EXAMINER	
BAYARD, DJENANE M	
ART UNIT	PAPER NUMBER
2141	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/027,457	COATNEY ET AL.	
	Examiner	Art Unit	
	Djenane M. Bayard	2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-9,11-17,19,20 and 23-53* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-9, 11-17, 19-20, 23-53* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This is in response to amendment filed on 11/17/06 in which claims 6-9, 11-17, 19-20 and 23-53 are pending.

Response to Arguments

2. Applicant's arguments have been fully considered but they are not persuasive.

3. As per claim 6, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., write access to be defined by the one or more owners written to the predetermined area of each disk) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues that Brunelle et al fails to teach using two indicia of ownership. However, Brunelle clearly teaches the first indicia by: *the storage device may be reserved for exclusive use by one or more storage network controllers by storing the storage network controller's unique identifier with an associated access privilege for the storage network controller in the storage device (See col. 3, lines 47-65).* Furthermore, Brunelle et al teaches using a SCSI reservation as the second indicia (See col. 5-7) that is stored the storage device (see col. 7, lines 8-9). Accordingly, Brunelle is sufficient to anticipate the claimed invention.

4. As per claim 9, In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., writing ownership information directly to a disk in sector S more specifically sector), of the disk...The SCSI reservation tag allows only the owner to write to the disk) are not recited in the

rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

5. As per claim 28, Applicant argues that Brunelle in view of Talagala fails to teach comparing the SCSI reservation tag to the ownership information of the same storage device and if there is not a match, changing the SCSI reservation tag to match the ownership information. However, Brunelle clearly teaches that the storage device processes a write command received from a cluster node in the reservation table indicates that there are no current reservation (See col. 7, lines 32-45), thus taking ownership of the disk. Talagala was introduced to emphasize the clear inherency in Brunelle et al that a comparison was done (See col. 5, lines 5-20).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 6–8, 27, 42-43, 51 and 53 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application No. 6,654902 to Brunelle et al.

a. As per claims 6 and 27, Brunelle et al teaches a method of claiming ownership of a disk by a network device in a network storage system comprising the steps of: writing ownership

information to a predetermined area of the disk (See col. 3, lines 47-65); a small computer system interface level 3 reservation tag to a state of network device ownership to provide a two part indicia of ownership for the disk, where the two part indicia of ownership are both written to the disk (See col. 5, lines 45-67, See col. 6-7).

b. As per claims 7, Brunelle et al teaches the claimed invention as described above. Furthermore, Brunelle et al teaches wherein the ownership information further comprises a serial number of the network device (See col. 5, lines 4-11 and col. 6, liens 38-54).

c. As per claim 8, Brunelle et al teaches wherein the network device comprises a file server (See col. 3).

d.. As per claim 42, Brunelle et al teaches wherein the small computer system interface reservation tag and the ownership information at the predetermined area of the disk indicate ownership by the same network device (See col. 3, lines 47-65 ad col. 5, lines 5-45).

e. As per claim 43, Brunelle et al teaches the claimed invention as described above. Furthermore, Brunelle et al teaches wherein the small computer system interface (SCSI) reservation tag is a small computer system interface level 3 (SCSI-3) reservation tag (See col. 5, lines 25-67).

f. As per claim 51, Brunelle et al teaches a plurality of disks having a first ownership attribute written to a known and constant location across all the disks and second ownership attribute in the form of a small computer system interface (SCSI) reservation tag to provide a two part indicia of ownership (See col. 3, lines 48-52); and a network device with an ownership layer for comparing the SCSI persistent reservation tag to the ownership information stored in the known and constant location of the same storage device and , if there is not a match, changing

the SCSI persistent reservation tag to match ownership information stored in the known and constant location (See col. 7, lines 30-45).

g. As per claim 53, Brunelle et al teaches A method, comprising writing ownership information to a predetermined area of the disk to claim write ownership by a first server (See col. 3, lines 49-48-52); setting a small computer system interface (SCSI) reservation tag to a state of the first server ownership to provide a two part indicia of ownership for the first server (See col. 5-7); and determining, by a second server, the disk is owned by the first server by reading the ownership information in the predetermined area of the disk (See col. 7, lines 30-45)..

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 9, 11-17, 19-20 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,654902 to Brunelle et al in view of U.S. Patent Application No. 2003/0093501 to Carlson et al.

a. As per claim 9 and 17, Brunelle et al teaches a network storage system comprising: a plurality of network devices; and a plurality of disks having a first ownership attribute written to a predetermined area of each disk (See co. 5, lines 27-37, *the read keys command requests that the shared device manager return a list of the cluster nodes that have previously registered with the storage device by returning a list of registration keys stored in the stored in the storage device*) and a second ownership attribute in the form of a small computer system interface reservation tag wherein the first and second ownership attribute are written to each disk (See col. 6, lines 38-54). However, Brunelle et al failed to teach wherein one or more switches, each network device connected to at least one of the one or more switch; each disk connected to at least one of the plurality of switches.

Carlson et al teaches a method, system and program for configuring system resources. Furthermore, Carlson et al teaches wherein one or more switches, each network device connected to at least one of the one or more switch; each disk connected to at least one of the plurality of switches (See page 2, paragraph [0039]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein one or more switches, each network device connected to at least one of the one or more switch; each disk connected to at least one of the plurality of switches as taught by Carlson et al in view of Brunelle et al in order to interconnect the attached host devices (see page 2, paragraph [0039]).

b. As per claim 20, Brunelle teaches and a plurality of disks having a first ownership attribute written to a predetermined area of the disk (See co. 5, lines 27-37, *the read keys command requests that the shared device manager return a list of the cluster nodes that have previously registered with the storage device by returning a list of registration keys stored in the stored in the storage device*) and a second ownership attribute in the form of a small computer system interface reservation tag (See col. 6, lines 38-54). However, Brunelle et al fails to teach wherein one or more switches interconnected to form a switching fabric; a plurality of disks, each of the disks connected to at least one of the switches; and one or more network devices, interconnected with the switching fabric, each of the network devices being adapted to own a predetermined set of disks of the plurality of disks.

Carlson et al teaches a network storage system comprising: one or more switches interconnected to form a switching fabric; a plurality of disks, each of the disks connected to at least one of the switches (See page 2, paragraph [0039]); and one or more network devices, interconnected with the switching fabric, each of the network devices being adapted to own a predetermined set of disks of the plurality of disks (See page 8, paragraph [0082], The panel displays a slider that the administrator may control to indicate the amount of storage space to allocate to the host).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate the teaching of Carlson in the claimed invention of Brunelle et al in order to interconnect the attached host devices (see page 2, paragraph [0039]).

c. As per claims 11 and 24, Brunelle et al in view of Carlson et al teaches the claimed invention as described above. Furthermore, Brunelle et al teaches wherein the small computer

system interface reservation tag is a small computer system interface level 3 persistent reservation tag (See col. 5, lines 25-67).

d. As per claims 12, Brunelle et al in view of Carlson et al teaches the claimed invention as described above. Furthermore, Brunelle et al teaches wherein the small computer system interface level reservation tag is set such that only the network device may write to the disk (See col. 5, lines 60-67 and col. 6, lines 1-6).

e. As per claim 13, Brunelle et al in view of Carlson et al teaches the claimed invention as described above. Furthermore, Brunelle et al teaches wherein the ownership attribute further comprises a serial number of the network device that owns that particular disk (Col. 5, lines 4-11 and col. 6, lines 37-54).

f. As per claim 14, Brunelle et al in view of Carlson et al teaches the claimed invention as described above. Furthermore, Brunelle et al failed to teach wherein each of the plurality of file servers can read data from each of the plurality of disks (See col. 5, lines 60-67 and col. 6, lines 1-6).

g. As per claim 15, Brunelle et al in view of Carlson et al teaches the claimed invention as described above. Furthermore, Brunelle et al in view of Carlson et al failed to teach wherein only a network device that owns one of the plurality of disks can write data to the one disk (See col. 5, lines 60-67 and col. 6, lines 1-6).

h. As per claims 16 and 19, Brunelle et al in view of Carlson et al teaches the claimed invention as described above. Furthermore, Brunelle et al teaches wherein the network devices comprise file servers (See col. 4)

i. As per claim 23, Brunelle et al in view of Carlson et al teaches the claimed invention as

described above. Furthermore, Brunelle et al teaches wherein the first ownership attribute further comprises a serial number of one of the one or more network devices (See col. 5, lines 4-11).

11. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,654902 to Brunelle et al in view of U.S. Patent Application No. 2003/0093501 to Carlson et al as applied to claim 20 above and further in view of U.S. Patent Application No. 2003/0061491 to Jaskiewicz et al.

a. As per claim 25, Brunelle et al Carlson et al teaches the claimed invention as described above. However, Brunelle et al in view of Carlson et al failed to teach wherein each of the network devices further comprises a disk ownership table, the disk ownership table containing ownership data for each of the disks.

Jaskiewicz et al teaches wherein each of the network devices further comprises a disk ownership table, the disk ownership table containing ownership data for each of the disks (See page 3, paragraph [0022]).

It would have been obvious to one with ordinary skill in the art at the invention was made to incorporate wherein each of the network devices further comprises a disk ownership table, the disk ownership table containing ownership data for each of the disks as taught by Jaskiewicz et al in the claimed invention of Brunelle et al in view of Carlson et al in order to give the host device permission to write and read data to and from the storage location the right device id (See page 3, paragraph [0022]).

b. As per claim 26, Brunelle et al in view of Carlson et al teaches the claimed invention as described above. However, Brunelle et al in view of Carlson et al failed to teach wherein the ownership table further comprises a world wide name for each of the disks, the world wide name being used for identification of each of the disks.

Jaskiewicz et al teaches wherein the ownership table further comprises a world wide name for each of the disks, the world wide name being used for identification of each of the disks (See page 3, paragraph [0021]).

It would have been obvious to one with ordinary skill in the art at the invention was made to incorporate wherein the ownership table further comprises a world wide name for each of the disks, the world wide name being used for identification of each of the disks as taught by Jaskiewicz et al in the claimed invention of Brunelle et al in view of Carlson et al in order to give the host device permission to write and read data to and from the storage location the right device id (See page 3, paragraph [0022]).

12. Claims 28-41, 44-50, 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application No. 6,654902 to Brunelle et al in view of U.S. Patent No. 6,732289 to Talagala et al.

a. As per claims 28, 34-36 and 52, Brunelle et al teaches network storage system one or more storage devices, each storage device having a predetermined area for storing ownership information and each storage device having a small computer system interface (SCSI) reservation tag (See col. 5, lines 25-67); at least one network device having an ownership table constructed based upon the ownership information from each storage device (See col. 7, lines 7-

17, *a reserve table stored in the storage device. The persistent reserve table includes a reservation entry for each reservation. The reservation entry includes an initiator identifier and a reservation descriptor*); the at least one network device having a disk storage layer for configuring the one or more storage devices identified in the ownership table into at least one volume for use by the network device (See col. 8, lines 46-55, *the registered cluster nodes are permitted to write data to the shared storage device because the type of reservation enabled is write exclusive registrants only*). However, Brunelle et al fails to teach the at least one network device having an ownership layer for comparing the SCSI reservation tag to the ownership information of the same storage device and, if there is not a match, changing the SCSI reservation tag to match the ownership information

Talagala et al teaches at least one network device having an ownership layer for comparing the SCSI level 3 reservation tag to the ownership information of the same storage device and, if there is not a match, changing the SCSI level 3 reservation tag to match the ownership information (See col. 5, lines 5-15)

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate at least one network device having an ownership layer for comparing the SCSI level 3 reservation tag to the ownership information of the same storage device and, if there is not a match, changing the SCSI level 3 reservation tag to match the ownership information as taught by Talagala et al in the claimed invention of Brunelle et al in order to provide verification of ownership (See col. 5, lines 5-15).

b. As per claims 44 and 49-50, Brunelle et al teaches a method for a network device to manage ownership of one or more storage devices in a network storage system, comprising the steps of: reading ownership information from a predetermined area of each storage device; accessing a small computer system interface (SCSI) reservation tag associate with each storage device (See col. 7); However, Brunelle fails to teach comparing the SCSI reservation tag to the ownership information of the same storage device and, if there is not a match, changing the SCSI reservation tag to match the ownership information; and configuring the one or more storage devices for use by the network device.

Talagala et al teaches at least one network device having an ownership layer for comparing the SCSI level 3 reservation tag to the ownership information of the same storage device and, if there is not a match, changing the SCSI level 3 reservation tag to match the ownership information (See col. 5, lines 5-15)

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate at least one network device having an ownership layer for comparing the SCSI level 3 reservation tag to the ownership information of the same storage device and, if there is not a match, changing the SCSI level 3 reservation tag to match the ownership information as taught by Talagala et al in the claimed invention of Brunelle et al in order to provide verification of ownership (See col. 5, lines 5-15).

c. As per claims 29, 37, 42 and 47, Brunelle et al in view of Talagala et al teaches the claimed invention as described above. Furthermore, Brunelle et al teaches setting ownership information at the predetermined area of each storage device (See col. 7, lines 1-17).

d. As per claims 30 and 38, Brunelle et al in view of Talagala et al teaches wherein the step of configuring further comprises: organizing the one or more storage devices into at least one Redundant Array of independent Disks (RAlD) group (See col. 3, lines 30-35)

e. As per claims 31, 39 and 48, Brunelle et al in view of Talagala et al teaches wherein the predetermined area of the one or more storage devices is sector zero of the one or more storage devices (See col. 5 lines 55-64).

f. As per claims 32 and 40, Brunelle et al in view of Talagala et al teaches wherein the ownership information is a serial number of the network device that owns that particular storage device (See col. 7, lines 1-17).

g. As per claims 33 and 41, Brunelle et al in view of Talagala et al teaches wherein the ownership table includes a world wide name for each of the storage devices, the world wide name being used to identify each of the storage devices (See col. 7, lines 1-17).

h. As per claim 45, Brunelle et al in view of Talagala et al teaches the claimed invention as described above. Furthermore, Brunelle et al teaches wherein the small computer system interface (SCSI) reservation tag is a small computer system interface level 3 (SCSI-3) reservation tag (See col. 5, lines 25-67).

i. As per claim 46, Brunelle et al in view of Talagala et al teaches the claimed invention as described above. Furthermore, Brunelle et al teaches in response to reading the ownership information, creating an ownership table on the network device that identifies the one or more storage devices owned by the network device; and using the ownership table to configure the one or more storage devices into at least one volume (See col. 8, lines 46-55, *the registered cluster nodes are permitted to write data to the shared storage device because the type of reservation*

enabled is write exclusive registrants only).

Conclusion

13. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Djenane M. Bayard whose telephone number is (571) 272-3878. The examiner can normally be reached on Monday- Friday 5:30 AM- 3:00 PM..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571) 272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Djenane Bayard

Patent Examiner

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